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THE NATIVE LANGUAGES OF CALIFORNIA

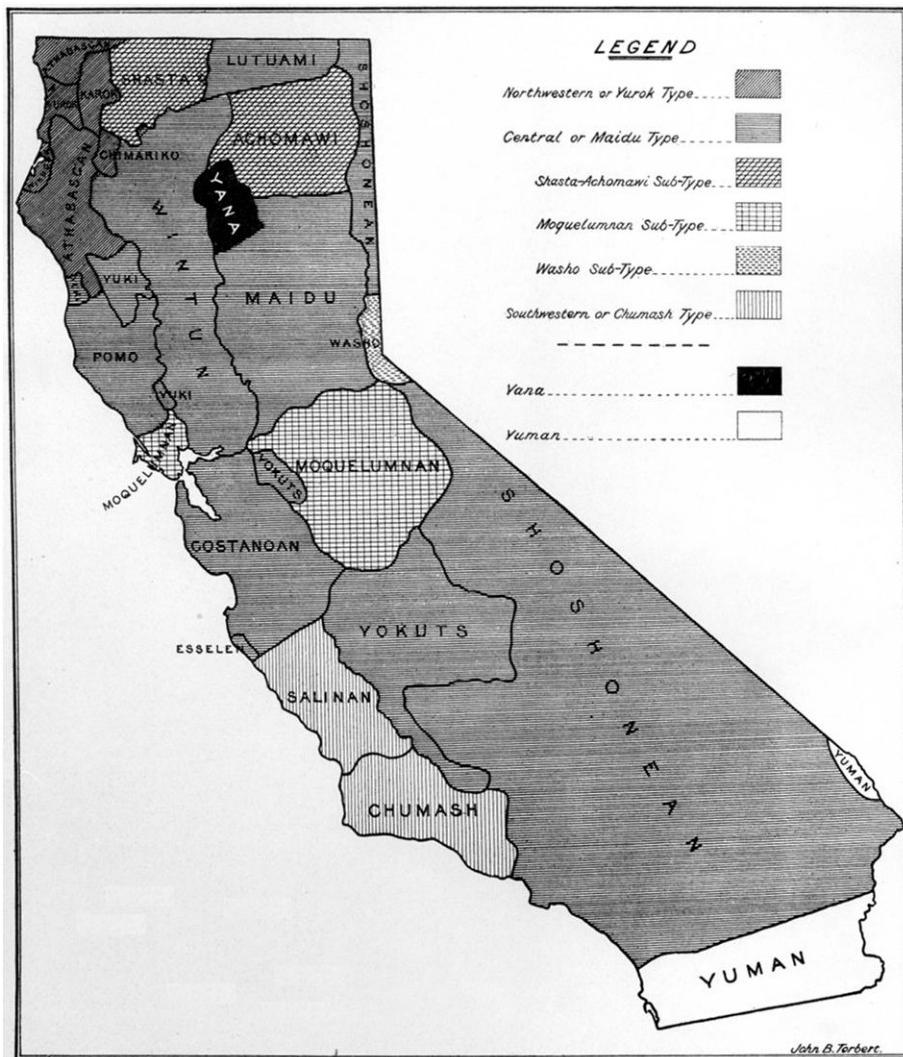
By ROLAND B. DIXON AND ALFRED L. KROEBER

INTRODUCTION

The following paper is the result of coöperative research on the part of the American Museum of Natural History, maintaining an ethnological expedition in California through the generosity of Mr Archer M. Huntington and of the Department of Anthropology of the University of California, which owes its existence to the munificence of Mrs Phoebe A. Hearst.

A few years ago one of the authors was engaged in a study of the Maidu language of northern California. It became evident almost at the outset that there was considerable structural similarity between this language, the Klamath language,¹ and the Sahaptin family of languages on the Columbia river. A positive relationship between these languages seemed probable until a more thorough investigation had been made and comparative material collected from several other Californian languages. It then became apparent that the general plan on which Maidu, Klamath, and Sahaptin were built was common to other languages of the region as well, but that this noticeable similarity extended no further than structure. The vocabularies of the languages were distinct. Hence relationship, in the only precise and allowable sense of the term, could not be alleged, and it became apparent that the diver-

¹ The Klamath with its dialect, the Modoc, constitutes the Lutuamian family of Powell. The territory occupied by the stock was partly in California, chiefly in Oregon.



MORPHOLOGICAL CLASSIFICATION OF CALIFORNIAN LINGUISTIC FAMILIES

sity of languages which had always been assumed for California, really existed.

This diversity is the most marked characteristic of California as an aboriginal linguistic area. America as a whole is a region of great linguistic diversity, and this tendency toward diversification reaches its climax in California, where twenty-two distinct stocks of languages are spoken within the boundaries of the state, according to Powell's accepted classification. That nearly half of the linguistic families represented in the United States¹ should thus occur within so small an area marks California as perhaps the most remarkable region for linguistic diversity known. The structural similarity of some of these distinct stocks evidently has a bearing on the larger question of the extreme diversity of the region, which is the fundamental problem of California linguistics. An attempt was therefore made by the writers to secure, through field investigation, information concerning the grammatical structure of all Californian languages. This task was rendered necessary by the fact that with one or two exceptions the grammar of these languages was wholly unknown. On the material thus collected this paper is based.²

The main purpose of the paper is to point out that Californian languages may be classified into several groups. It must be clearly understood, however, that the classification that has been attempted

¹ Fifty-two between Canada and Mexico.

² Besides Gatschet's "The Klamath Indians of Southwestern Oregon" (*Cont. N. A. Eth.*, vol. II), which contains an exhaustive grammatical account of this semi-Californian language, there is only one published grammar of a Californian language, that of the Mutsun (Costanoan family), by Arroyo de la Cuesta, published as vol. IV of Shea's *Library of American Linguistics*. B. Sitjar's Vocabulary of San Antonio Mission (Shea, vol. VII), of the Salinan family, has prefixed to it some fragmentary grammatical notes extracted from the vocabulary by the editor. There is also a brief sketch of the Chumeto language (Moquelumnan family), by A. S. Gatschet, in *The American Antiquarian*, vol. v, 71, 173. Of the three great extra-Californian languages extending into the state, Athabascan is the best known grammatically. Shoshonean and Yuman are practically unknown. With the exception of Klamath and Esselen, material has been collected by the authors from every stock, including the one or two which were already more or less known. Esselen has become extinct and the morphological information regarding it has been derived from two manuscripts for the use of which the authors are indebted to the courtesy of the Bureau of American Ethnology. Mr A. M. Tozzer has aided in the collection of material by work on Moquelumnan. The only Shoshonean material obtained by the authors was from the Ute, but valuable information in regard to one of the Shoshonean dialects of southern California was rendered available to them through the courtesy of a correspondent. Mr P. E. Goddard has kindly revised some of the Hupa (Athabascan) material.

deals only with structural resemblances, not with definite genetic relationships; that we are establishing not families, but types of families.¹ When several linguistic stocks have been put into one group, there is no implication that they form one family, in the sense in which this word is accurately used in philology. The classification here proposed is really one of another order from that used by Powell, for structure and not lexical content is made the basis on which all comparisons are made.²

BASIS OF CLASSIFICATION

The incorporation into the verb of the pronoun, and at times even of the noun, has generally been regarded as the most characteristic and fundamental feature of American languages. The fact, however, that many Californian languages differ from the great bulk of the languages of the continent in that they lack incorporation, makes the question of its presence or absence a consideration of prime importance.

Syntactical cases—that is, subjective, objective, and possessive—are not in general found in American languages, and on this account their frequent presence in California is of considerable importance. Indeed, the presence of syntactical cases has a double right to be considered as a factor in classification, from the fact that there seems to be a direct connection between syntactical cases on the one hand and incorporation on the other.

In a fully incorporating language, such as Iroquois or Nahuatl, cases are theoretically a superfluity. Apart from any possible in-

¹ The Uto-Aztecán languages may serve as a hypothetical example of what is meant. According to some authorities Shoshonean, Piman, and Aztecán constitute each a distinct family by itself. Even these authorities would admit, however, that the three families have certain close and rather striking morphological similarities. Boas (*Internat. Cong. Anthropology*, 1894, p. 339) has attempted a similar classification for the North Pacific coast. It is with similarities of this sort, and groups based on them, that the present paper deals.

² With one or two doubtful exceptions all the material collected by the authors supports as correct the classification of stocks made by Powell. The possible exceptions are that the Shasta (Sastean) and Achomawi (Palaihnihan) in the north, and the Costanoan and Moquelumnan in the south, may respectively constitute single stocks. Gatschet has already noted the possibility of connection between Shasta and Achomawi; and Costanoan and Moquelumnan, until separated by Powell, were always regarded as related. Evidence in both cases is as yet inconclusive, so that Powell's separation of the languages in question must be provisionally accepted.

corporation of the noun-object itself, both subject and object are in such languages regularly represented in the verb by pronominal elements, which, by their form or interrelation, make clear the relation to each other of the two uninflected nouns standing outside of the verb. This constitutes the so-called appositional structure, in which the sentence is outlined in the polysynthetic verb by means of the verb radical and the two pronominal elements that refer to the subject and object, while these two nouns themselves stand, as it were, in apposition to the pronominal elements and have their functions made clear by them. The nouns in the sentence do not form part of its structure, but merely hang to it. Chinook furnishes a clear example of this type of syntax and Algonkin another. In a language of this type, therefore, the relation of the subject and the object of the sentence is made sufficiently clear by the verb and any further expression of this relation by case-endings is unnecessary.

If, on the other hand, the relation of the nouns in the sentence is clear from their inflectional endings, it becomes superfluous again to express this relation by incorporating the pronouns in the verb. Therefore the existence of syntactical cases in a language must tend to render less probable the existence therein of incorporation and *vice versa*.

In regard to the possessive relation, the chief of the purely internominal relations, the same two contrasted methods of expression are also to be distinguished. As a rule in American languages this relation is expressed by means of the possessive pronoun, or, as it could better be called in most cases, possessive pronominal particle. On the other hand in other languages, the same relation is often expressed by a purely formal element. In the phrase 'woman her-foot,' the element 'her,' in spite of definite concrete significance, is really only a syntactical means. In the phrase 'woman's foot,' the method of expression is fundamentally different, a purely formal element instead of a material one being used for formal purposes. It is evident, moreover, that if both the subjective-objective and the possessive relations are expressed by case-inflections instead of pronominal elements, the pronouns, being released from their syntactical functions, will tend to become independent parts of speech not very different from nouns. Under such

circumstances they may themselves assume the case-inflections of nouns. When this occurs, their morphological value becomes identical with that of substantives,¹ instead of being merely the equivalent of an inflection.

Of course it does not follow that the presence of either pronominal incorporation or of syntactical case-inflection necessitates the absence of the other. Eskimo is a very strictly incorporating language (in regard to the pronominal elements) and yet has a purely formal subjective-possessive case that is invariably used. Conversely, the lack of one of these features does not necessarily imply the use of the other, inasmuch as there are languages in other parts of the world which employ neither of these means. But that there must be a tendency for these two very different methods of expression to crowd out and replace each other, seems obvious. That, on the whole, such a tendency actually is operative in American languages is evident.

It therefore seems that the two factors of pronominal incorporation and of syntactical cases, both on account of their intrinsic importance and their interdependence, go far toward characterizing two very different types of languages and should be accorded first consideration in any grouping of languages in an area where both occur.

Naturally more or less allied to formal cases and sometimes difficult to distinguish from them, are material cases, or as many prefer to call them, appositions, such as locatives and instrumentals. Cases of this kind, while not the most deep-going feature of any language, are nevertheless of some importance on account of their obvious connection with syntactical cases, for the occurrence of the latter would naturally, through the operation of the principle of analogy, extend itself to an occurrence of the local cases. Such cases as appositions, therefore, are given consideration in the present classification.

A fourth feature deserving considerable attention is phonetics. This is obviously of some importance in itself and is given additional weight from the fact that, at least in California, simple phonetics and

¹This actually occurs in Sahaptin. For instance, *enmi*, my, far from being a prefix or suffix or even a worn-down enclitic, is an independent word composed of the pronominal root *en* and the case-ending *-mi* which is used on all nouns. The same condition exists in Maidu and in several other Californian languages.

simple structure usually go together. It would seem that the two features are causally related.

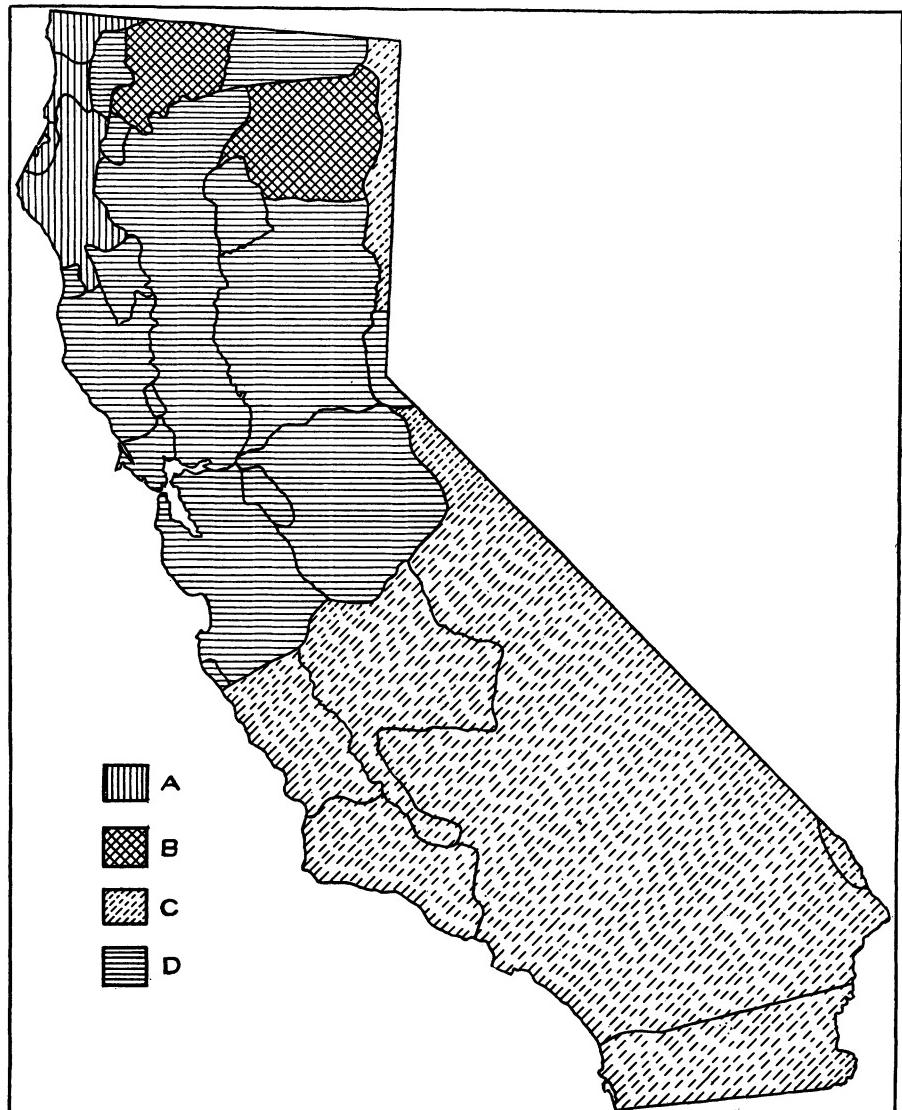
By simple phonetics, however, is meant not so much that the sounds of the language are soft and pleasing as that these sounds are clear-cut and distinct and full, and that the words resulting from the combination of these sounds are, so to speak, transparent and readily separable into their component parts. In such a language the component parts of a word are recognizable, whereas in a language possessing complex phonetics they are so amalgamated as individually to be obscure. Of course, harshness and complexity are not necessarily always coëxistent; there can be and indeed there are phonetically simple languages which are quite harsh. But as a general rule simplicity and smoothness, and complexity and harshness, do actually occur together.

Incorporation, syntactical cases, appositions and phonetics—it is in reference to these four fundamentally related features that the following classification of Californian languages has been primarily made. There are a number of other features, especially the occurrence of a plural and of reduplication, on which material has been collected, and which have been given some consideration; but they all are of much less importance than the four related characteristics which have been enumerated.

To aid in the consideration of the features above discussed, it may be said in anticipation that the languages of California appear to fall into three geographical groups. The first and largest group occupies the interior of the state. On the coast there are two smaller groups—a northern and a southern.

PHONETICS

On the whole the Californian languages are smoother and softer than other American languages. Throughout the state there are only about four stocks that can be considered at all rough or difficult in pronunciation. Three of these are the Yurok, the Wishosk, and the Hupa with its related Athabascan dialects. These languages are spoken over a continuous area in the northwestern part of the state. The fourth language of this class is the Achomawi, of the Pit river region in the northeastern part of the state. This



LANGUAGES OF CALIFORNIA. I—PHONETICS

A, Northwestern group (roughest). *B*, Shasta-Achomawi sub-group (less rough). *C*, Southern group (in general soft, but obscure). *D*, Central group (soft and distinct).

language shows less phonetic difficulty or complexity than the three others. Shasta, which is possibly genetically related to Achomawi and which, territorially, lies between it and the Hupa-Yurok-Wishosk phonetic group, is less smooth than the remaining languages of the state.

It will be observed that all these comparatively rough languages are situated in the extreme north of California and thus are nearest to the remarkably rough and harsh languages of the Columbia river and the North Pacific coast, such as Chinook and Selish. They fall far behind these, however, in their phonetic difficulty. Even when compared with North American languages in general, they are not notably rough.

In comparison with these few northern Californian languages, the remaining languages of the state must be characterized as soft. There are, however, sufficient differences among them to make them fall into two groups — one occupying the central part of the state and one the southern. There is not much difference between these two groups in point of mere smoothness ; the central group, however, is distinguished by a certain phonetic distinctness, contrasting with some obscurity in the south.

In the central group there are some remarkably vocalic and harmonious languages, such as Maidu and Wintun. There are others that are not so. Yuki explodes many consonants, and Pomo has a frequency of aspirated gutturals. All the languages of the group, however, are alike in being phonetically clear-cut. The syllables have a simple structure, and preserve their distinctness when joined. The elements of a compound word remain visible, being altered little or not at all by their juxtaposition.¹

¹ Examples showing variability of stems in composition in Yurok and Wishosk, and of invariability in Maidu and Yana :

YUROK	WISHOSK	MAIDU	YANA
<i>noo</i>	<i>pelin</i>	<i>ra't-er</i>	<i>pa-sasi</i>
<i>ni-L</i>	<i>p'leli</i>	<i>ra'L-el</i>	<i>pa-kisi</i>
<i>nää-a</i>	<i>p'lerer</i>	<i>ra't-se</i>	<i>pa-rtcesi</i>
<i>ne-mi</i>	<i>peloi</i>	<i>wa-bak-do</i>	<i>pa-utisi</i>
<i>nerer-pi</i>		<i>te-bak-do</i>	

Examples of the distinctness of syllables as found in compound words in languages of the central group :

MAIDU.—*tetatamototikasi* = I made (him) squeeze (them) with (his) feet (*te-ta-ta-moto-ti-ka-si* = with-feet-press-together-causative-tense-I). *soháhamototiweten* = after having made him carry (them) in a bundle on (his) shoulder (*so-ha-ha-moto-ti-weten* = shoulder-carry-together-causative-after-having).

In the southern group these characteristics do not occur so prominently. Instead of the full simple sounds of the central region, obscure sounds are often found. Word elements are also less simple, and hence the structure of compound words is not so transparent as in the central group. Shoshonean is a fair example of this phonetic type. As has been said, however, none of the languages of this area can in any sense of the word be called harsh.

The northern phonetic group thus includes Athabascan, Yurok, Wishosk, and Achomawi.

The central phonetic group includes Maidu, Wintun, Yana, Yuki, Pomo, Moquelumnan, Costanoan, Esselen, Washo, Chimariko, Karok, Lutuami, and Shasta, the last approximating the somewhat rough Achomawi.

The southern phonetic group includes Shoshonean, Yuman, Chumash, Salinan, and Yokuts.¹

The distribution of these groups is shown in plate II. Excepting the first, each of these three groups of languages extends over a continuous area.²

¹ The occurrence in California of some of the more uncommon sounds is the following: *tł* (palatal *l*) is found very prominently in Yurok, Wishosk, and Athabascan. It also occurs in Wintun. In the south a softer form occurs in Chumash and Salinan.

ng (nasalized *k*) has a scattering distribution. It has been found in Athabascan, Washo (where it is very frequent), Yokuts, and Moquelumnan.

Nasalized vowels occur only in some dialects of Yuki, but there they are abundant. *z* occurs only in Moquelumnan.

f, which is found in several languages near the Columbia river, but is rare elsewhere in America, occurs only in Karok and Esselen.

r has an irregular but continuous distribution and shows considerable difference in pronunciation. It occurs in Yurok, Wishosk, Karok, Chimariko, Shasta, Wintun, Yana, Pomo, and Costanoan, and in Shoshonean. It occurs in Chumash, Salinan, Yokuts, and Moquelumnan in combination with certain consonants (*rk*, *tr*, *cr*), but as it is never found standing alone in these languages, the combinations are more probably only specialized developments of such consonants rather than true unions of separate sounds of which one is *r*.

ö and *ü*, usually more or less obscure or impure, occur in a continuous area comprising Maidu, Moquelumnan, Shoshone, Yokuts, and Chumash.

² Below are given three short specimens of texts, one from each of the above phonetic groups.

YUROK

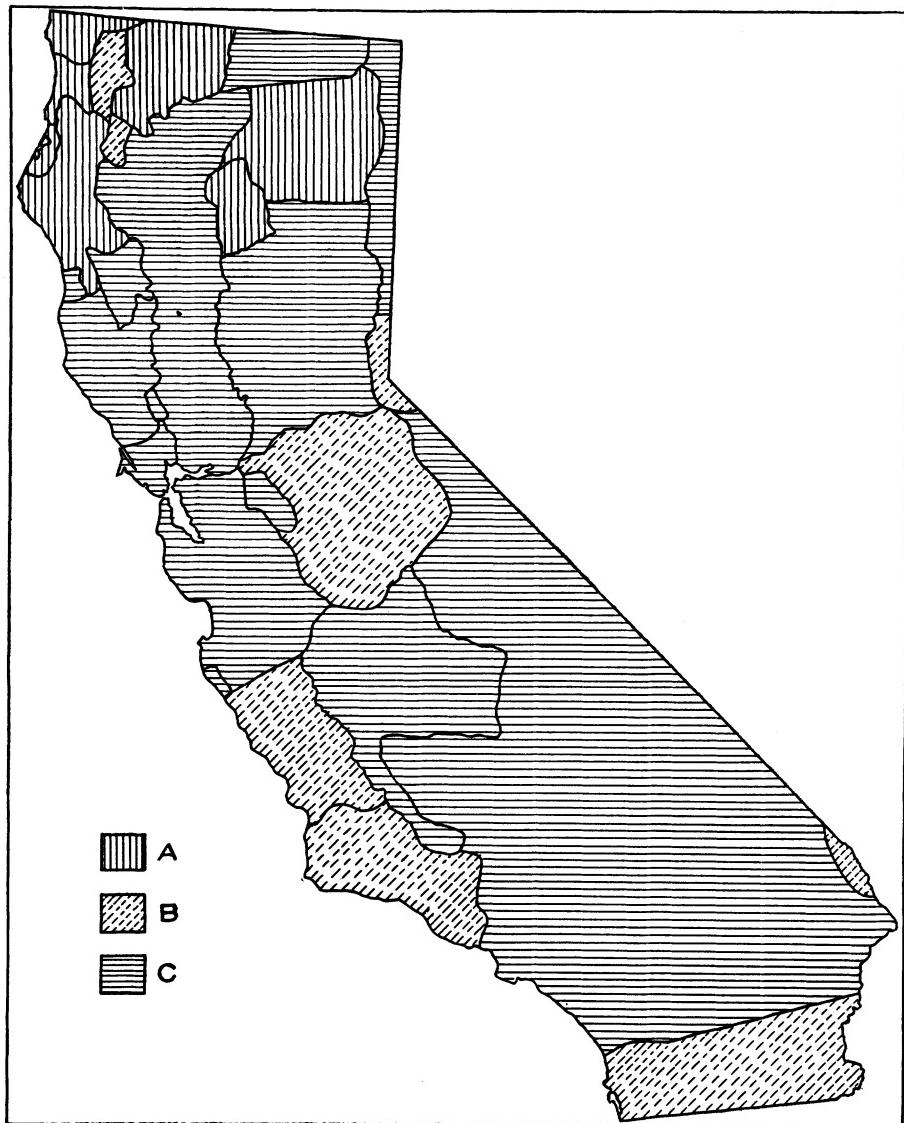
Tuwii'tmeLhèktsik wò'kLı manukwans'c tsüL ne'g'ec neqā"peL hāLtowātökico-nawon kicki'tò'me'u w tunâLhipu'rqi'ra'l naLqèle'l kitsaotò'me'u picwiit'me Lhèktsik alâ'lekwi'c'l.

MAIDU

O'nötötököm ma'idüm amā'm mats'o'iam sümì' hu'nkoido ado'm ayü'kakitsioia, awe'ten k'aipe petso'ia k'ai'pebosweten bül'stsoia atse'tkan mökör'lösim so'ltsoia.

YUMAN (MOHAVE)

Niny'niyäuk nyiny'masce'i'hé'e inowah'itc inyepek va rim'o inakim'a iibolye' nyahakweny'e idaum'o nyipän aim'o hatpä asint'itc hivatcim'o akyam'o hidonye'.



LANGUAGES OF CALIFORNIA. 2—PRONOMINAL INCORPORATION
A, Complete incorporation. *B*, Incomplete incorporation. *C*, No incorporation.

INCORPORATION

As to incorporation of the pronominal elements in the verb, three types may be distinguished: The first is complete and thorough incorporation both of the subject and object pronoun; the resulting form has been so solidified that the separate pronominal elements can no longer be distinguished with certainty or analyzed with any regularity—they have evidently become modified by each other or by contact with other elements in the polysynthetic verb. Eskimo and Iroquois are examples of this extreme type. The second type either is full and regular incorporation,—in which, however, the pronominal elements remain clear and unaltered,—or it is incomplete incorporation, in which case not all of the pronominal elements are included in the verb. Siouan and Nahuatl would belong to this class. The third class lacks incorporation altogether. Lutuami is an example.¹

All three of these types of incorporation occur in Californian languages, furnishing another instance of the diversity that obtains in the linguistic relations of the state.²

To the first type, that of most complete incorporation, belong, first: Athabascan, Yurok, and Wishosk. These three contiguous languages, it will be remembered, are similar in their phonetic character, as indeed they are in most other features. In addition there are Achomawi, Shasta, and Yana. These six languages occupy a nearly continuous belt stretching across the northern part of the state. Of the six, Yana is the only one that is distinctly soft and smooth phonetically.

The second class, that of less complete incorporation, is irregularly distributed. In the northern part of the state it includes Karok and Chimariko, which are both in contact with the fully incorporating languages. In the south Chumash and Salinan, adjacent languages, belong to this type. Still farther south, Yuman

¹ An occasional reduction of a pronoun to an enclitic, or even to an affix of a verb, does not render the language an incorporative one. These features occur in Lutuami, but Gatschet properly calls the language non-incorporative (*Klamath Indians*, pt. I, pp. 418, 548). The matter being one of quantitative rather than of qualitative differences, the bulk of cases, or the tendency of the language, must be considered rather than that a few cases be insisted on.

² See Appendix A for examples.

must be reckoned of the same type. In the central portion of the state, Moquelumnan¹ and Washo belong to this class.

The third, or non-incorporative class, includes Klamath, Maidu, Wintu, Yuki, Pomo, Costanoan, Esselen, Yokuts, and Shoshonean.² The territory of this class is continuous.

Plate III shows the occurrence of the three types of incorporation.

Similar in nature to incorporation of subjective and objective pronominal elements in the verb, is incorporation of the possessive pronominal element in the noun. Generally the two features occur, or are lacking, in the same languages. The only exceptions are, on the one hand, Shasta and Achomawi, which are verbally highly incorporative, but have their possessive pronouns detached from the noun;³ and on the other, Shoshonean, which does not seem to be incorporative in its verb, but affixes its possessive pronoun. With these exceptions the distribution of this form of incorporation is identical with that of verbal subjective-objective incorporation.

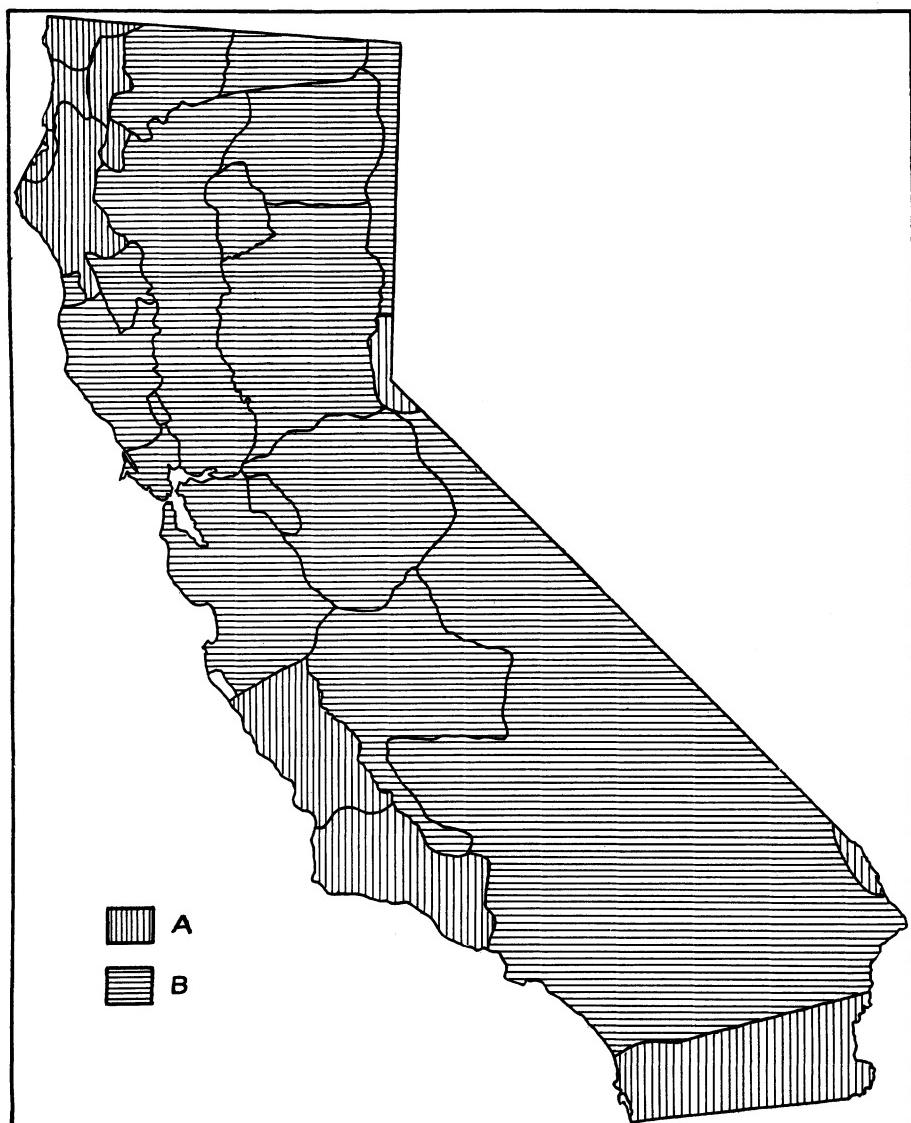
SYNTACTICAL CASES

Subjective-Objective.—It has been said that the presence of syntactical cases is characteristic of the languages of a large part of California. If the purpose of the subjective and the objective cases

¹ Gatschet (*Amer. Antq.*, vol. v, pp. 174-175) gives an incorporated form of the subject pronoun only. In northern Moquelumnan, at least, there is unquestionable incorporation of the objective as well as of the subjective pronoun. For instance: *eteyani-ma*, see-thee-I; *eteyani-ti*, see-thee-we; *eteyati-s*, seest-me-thou.

² In at least one of the Shoshonean dialects of California pronominal elements are intimately combined with modal or other elements, and the resulting particles affixed to verbs. These particles, however, are frequently affixed to a pronominal stem, or to an adverbial adjunct of the verb instead of to the verb itself. They may even be attached to any word in the sentence. While this is undoubtedly a form of what is called incorporation, somewhat analogous to the constructions found in Selish, it differs considerably from the pronominal incorporation occurring in California, and inasmuch as the pronominal particles are separable from the verb, this condition of structure may be regarded as the equivalent of the absence of incorporation elsewhere in California.

³ It is of some significance that Shasta and Achomawi are non-incorporative as to possessive pronouns. In most respects these languages belong to the central group. They differ from it only in somewhat rougher phonetics, and in a high development of verb-incorporation, which is altogether lacking from the other languages of the group. That, in spite of this verb-incorporation, they are without noun-incorporation, brings them very much closer to the central group.



LANGUAGES OF CALIFORNIA. 3—SYNTACTICAL CASES

A, absent. *B*, present.

be merely to distinguish the subject from the object, it is obvious that one case-ending is sufficient, to whichever of the two nouns it be affixed. In not one of the twenty-two stocks of California are there found both a subjective and an objective case at the same time.

A subjective or nominative is found in three nearly contiguous stocks : Maidu, Achomawi, and Shasta.¹

An objective or accusative case is found more frequently. It occurs in Lutuami, Wintun, Yuki, Costanoan, Moquelumnan, Yokuts, and Shoshonean.

If the occurrence of the two cases be combined, as may justifiably be done, since one is in effect the equivalent of the other, it will be seen that the regions where such a case is found comprise a continuous area covering the entire state, with the following exceptions :

1. An area in the northwest containing six territorially small stocks,² in all but one of which pronominal incorporation occurs.
2. An area in the southwest containing the incorporating Chumash and Salinan stocks.³
3. An area in the extreme south containing Yuman, also incorporateive.
4. The detached area occupied by the small Yanan stock, which also incorporates the pronominal elements.
5. Another small isolated area occupied by Washo, which is also to some degree incorporateive.

Possessive. — The families that use a possessive case are the same that use a subjective-objective case, with the following excep-

¹ In Maidu this case-ending is an ordinary subjective, being affixed to the subject irrespective of the nature of the verb. In Shasta-Achomawi this case-ending is not used on the subject of an intransitive verb, but is employed only when the verb has an object. This case should therefore properly be called not subjective but agentive, while the unaffixed form of the noun is not really so much an objective as a neutral or absolute case. Examples :

MAIDU (subjective = -m)—

mai'düm has sū wō'kan = man did dog hit. (The man hit the dog.)
uni'm süm o'kmaka = this dog will be hungry.

SHASTA (agentive = -kwa)—

a'psükwa kwad'Xwavig dari' tci = dog bit woman. (The dog bit the woman.)
ki' mpiwa a'psü = hungry this dog. (This dog is hungry.)

² Yurok, Wishosk, Athabascan, Karok, Chimariko, and Pomo.

³ Esselen may or may not belong to this area. It is uncertain whether it possessed any syntactical cases.

tions: Pomo and Yana¹ indicate neither subject nor object, but express the possessive relation by a case. On the other hand, Cosanoan, which has an objective,² lacks a possessive.

If we consider the occurrence of any syntactical case, irrespective of which one it may be, as compared with the total absence of cases, we find that out of twenty-two stocks in California, twelve or thirteen have at least one such case.³ The remaining languages consist, first, of Yuman and Washo which are both partly extra-Californian; second, of Chumash and Salinan on the southern coast; and, last, of the small compact northwestern group, consisting of Yurok, Wishosk, Athabascan, Karok, and Chimariko. The distribution of syntactical cases is shown in plates IV and V.

APPPOSITIONS

Cases of material as opposed to formal significance, or appositions, or locative and instrumental suffixes, however they may be called, are a prominent feature of Californian languages. It appears that they are absent from only three stocks, namely, the Chumash and Salinan in the southwest — which, in other connections, have previously been mentioned as standing apart from surrounding languages — and the otherwise isolated Yana. These three languages employ, instead of case-suffixes, prepositions, that is, separate words placed before the noun.⁴

¹ Yana, which is otherwise entirely without cases, syntactical or local, forms a possessive in *-ki*. Inasmuch as the possessive in northern Maidu is *-ki*, it seems probable that this solitary Yana case is due to Maidu influence. The northern Maidu *-ki* becomes *-k* in the south, and in the extreme south is lost altogether, so that a small portion of the Maidu stock is without a possessive case.

² According to Arroyo de la Cuesta, op. cit.

³ In regard to Esselen, as said above, the material extant is too insufficient to allow of a positive determination of the presence or absence of syntactical cases.

⁴ Examples:

YANA

ivw'l wa'wi = in the house.

ki ina = with a stick.

CHUMASH

alapaya ma'm = on the house.

kitca hutu = like a dog.

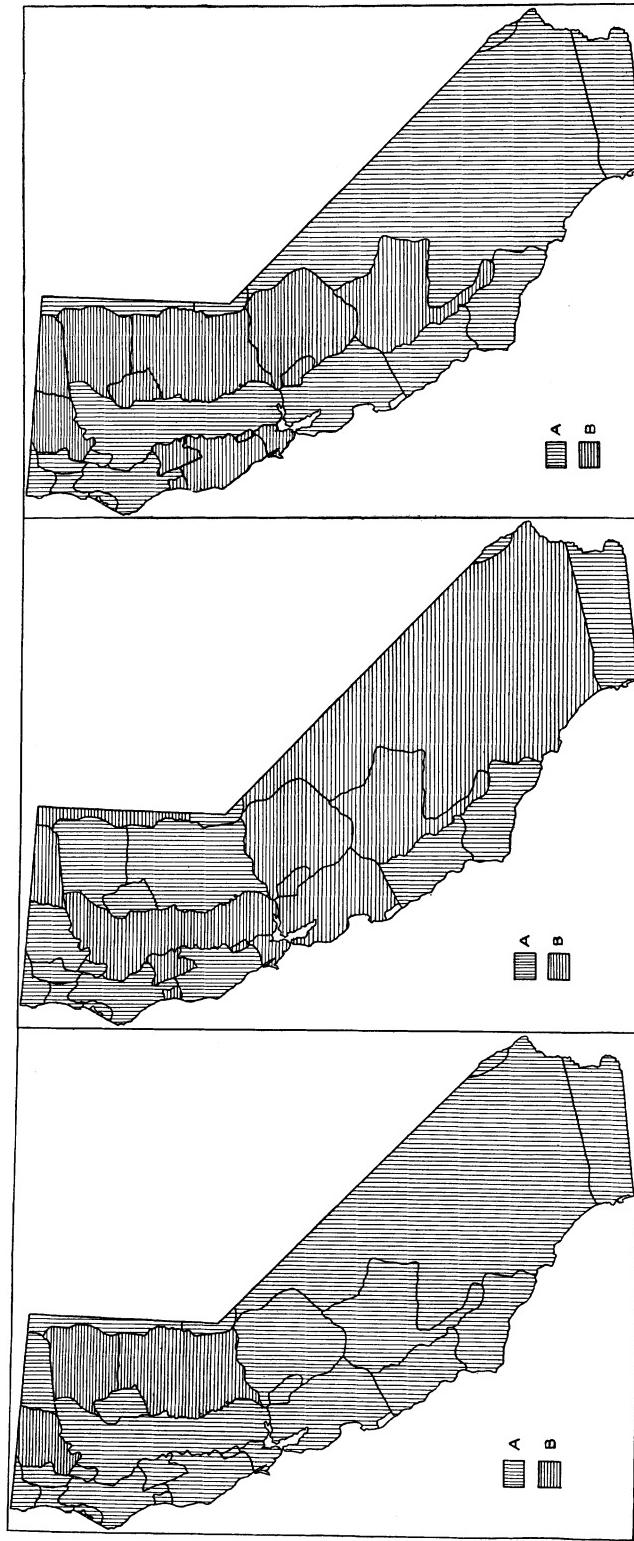
ksunuwu axöp = with a stone.

lülükün matcayac = in the basket.

SALINAN

täke tecaan = in the basket.

lëmo t·akat = on the mountain.



4. Subjective. (A , absent. B , present.)

5. Objective. (A , absent. B , present.)

6. Possessive. (A , absent. B , present.)

LANGUAGES OF CALIFORNIA—SYNTACTICAL CASES (SEPARATELY)

The range of ideas expressed by these appositions is quite wide. An instrumental is almost universal. Locatives, of course, make up the majority of the suffixes. Besides a general locative some of the most frequently occurring are inessive, superessive, introessive, ablative, and terminative. Besides these, comitatives, similatives, partitives, and suffixes expressing similar ideas, are found.¹

In the northwestern (Hupa-Yurok) region this feature seems to be less developed than elsewhere. The distribution of appositions is shown in plate VI.

PLURAL AND REDUPLICATION

On the whole, the existence of a plural in nouns is not a common feature of Californian languages. Roughly, the absence of a plural is characteristic of the northern part of the state. North of the latitude of San Francisco, Lutuami has a reduplicating distributive, Washo a curious final reduplication, probably distributive rather than plural; and Yuki a not very prominent plural. All the remaining languages are without a plural. South of this latitude, however, the reverse is the case. Besides Yuman, which in this respect as in most others stands isolated, Yokuts is the only language of this part of the state that has neither a well-marked plural nor a distributive. The occurrence of a plural is shown in plate VII.

Several of the languages that have been given as lacking a plural show plural forms for a very few substantives, mostly words denoting human beings. Thus, in Maidu the words for woman, husband, child, and dog have been found to have a plural, but only these.² Of course a few sporadic occurrences of this sort do not give the language a plural. There seems to be a tendency in languages the world over to give to words denoting human beings a plural more frequently than to other words. Conversely, inanimate nouns are often excepted where there is a plural.

Reduplication of nouns to indicate a plural, distributive, or col-

¹ See Appendix B for comparative table of syntactical cases and appositions.

² Similarly in Yokuts only words denoting human beings, and in Karok a few terms of relationship, have as yet been found to show a plural. The few Maidu terms possessing a plural also have a dual. The affixes used to express this dual and plural are the same that are used to indicate them in pronouns and demonstratives.

lective is generally absent from Californian languages.¹ It is found in Shoshonean, Washo, and Lutuami, but the only purely Californian language that shows it is Chumash, which is in contact with Shoshonean.² Reduplication is a very important feature in Selish, and of more northern languages of the Pacific coast (Wakashan and Tsimshian); in Klamath, which is adjacent to Shoshonean; in Piman and Aztecan, which are thought to be related to Shoshonean, and in other Mexican languages. There is thus a long and nearly continuous area from southern Alaska to southern Mexico, along the watershed of the continent, in which this feature occurs, while in the greater part of the continent to the east it is rare. This belt of reduplication virtually surrounds California, but has practically not affected it. The absence of reduplication is a characteristic of California.

MINOR FEATURES

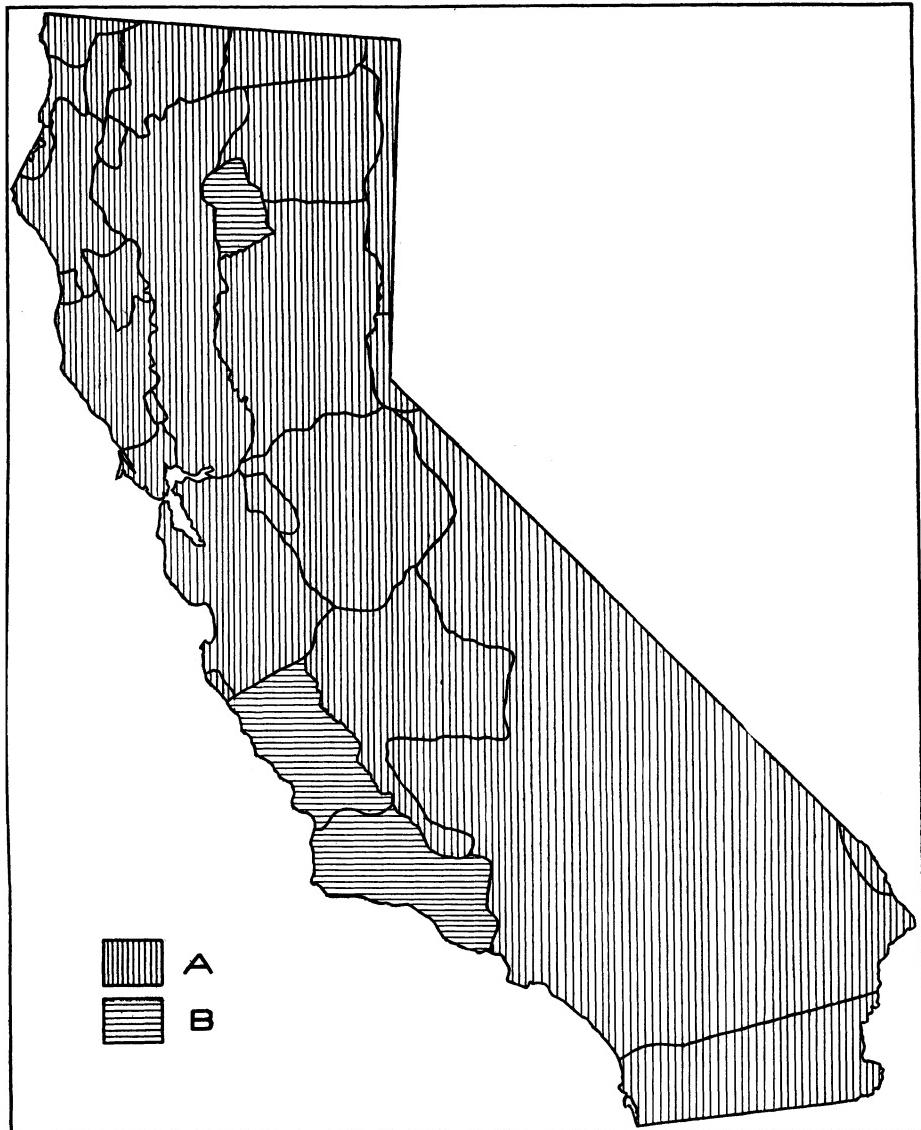
There are a number of features which occur too rarely in Californian languages or have not enough bearing on the general structure of a language to be of much consequence in a classification, but which present points of interest that warrant their brief consideration.

Dual.—A few Californian languages show a dual in the pronoun. These are the contiguous Maidu, Washo, and Wintun in the north, and the contiguous Yokuts and Chumash in the south. The existence of a dual in the pronoun is apparently not causally connected with the existence of a plural in the noun, for Maidu and Yokuts possess a pronominal dual but lack a plural in nouns, while

¹ Only a substantival reduplication is referred to. There is scarcely a language in America, except Eskimo, in which reduplication of the verb, usually to express iteration or a similar idea, does not occur. Nouns which in their normal form are duplicated (Karok : *nekic-nekic*, hog; Maidu : *gasqasi*, blue-jay) are found in many Californian languages, but of course are not instances of formal reduplication. Very often the duplication seems to be onomatopoetic. Adjectives are also often found duplicated in their normal form (Achomawi : *stsats'stsatsitji*, rough; *djaidjáitji*, elastic). Such duplication, of course, occurs outside of California, as for instance in Chinook.

² Maidu shows a few cases of distributive reduplication, analogous to its scattering plurals. Examples :

<i>sewi</i> , river.	<i>seuseuto</i> , rivers, every river.
<i>tsa</i> , tree.	<i>tsatsato</i> , trees, every tree.
<i>yamani</i> , mountain.	<i>yamanmánto</i> , mountains, every mountain.
<i>sü</i> , dog.	<i>süsüto</i> , dogs, every dog.



LANGUAGES OF CALIFORNIA. 7—APPOSITIONS

A, present. *B* absent.

Salinan and Yuki, which have a plural, lack the pronominal dual altogether, so far as is known.¹

Gender.—The distinction of sex in the pronoun is a feature that marks certain languages of Oregon and the coast to the north (Chinook, Kalapuya, Selish). It is found nowhere in California except among the Pomo.²

Sex Differences.—Yana shows a remarkable difference in the words used by men and women.³ No other language in California possesses this feature,⁴ which thus becomes another piece of evidence illustrating the isolation of Yana.

Demonstratives.—Some of the languages of the state have two demonstratives, some three. Nowhere is there any evidence of a high development and consequent syntactical use of the demonstratives such as occurs in Kwakiutl and to a less extent in other languages of the north Pacific coast.

¹ It would seem that the presence of the dual is in some way connected with a tendency to systematize the personal pronouns. In all the languages where it occurs the three persons of the pronoun are similar in form, and the dual and plural are formed regularly. Examples (the Yokuts forms given being possessives) :

	MAIDU	WINTUN	YOKUTS	CHUMASH
Singular	1 <i>ni</i>	<i>ni</i>	<i>nim</i>	<i>k</i>
	2 <i>mi</i>	<i>mi</i>	<i>min</i>	<i>p</i>
	3 <i>mom</i>	<i>pi</i>	<i>amin</i>	<i>s</i>
Dual	1 <i>nisam</i>	<i>nel</i>	<i>nimgin</i>	<i>kis</i>
	2 <i>mimam</i>	<i>mel</i>	<i>mingin</i>	<i>pis</i>
	3 <i>mosam</i>	<i>pel</i>	<i>amingin</i>	<i>sis</i>
Plural	1 <i>nisem</i>	<i>nite</i>	<i>nimak</i>	<i>ki</i>
	2 <i>mimem</i>	<i>mite</i>	<i>minak</i>	<i>pi</i>
	3 <i>mōsem</i>	<i>pite</i>	<i>amnak</i>	<i>si</i>

² Pomo, Kulanapo dialect : he, *mip* ; she, *mit* ; him, *mibal* ; her, *miral*.

³ Examples :

- MALE SPEAKING :
milteśindja, I am running.
halisiwā'ma, I am whipping you.
nī'tusasindja, I am going away.
yā'na, Indian.
mari'mi, woman.
a'unā, fire.
tna, a stick.

- FEMALE SPEAKING :
milteśi'ndj.
halisiwā'm.
ātusasindj.
ya.
marī'm.
au.
i.

⁴ Terms of relationship among many California tribes are different for men and for women speaking, as is the case throughout America and in other continents. This distinction is evidently made so frequently by primitive peoples because the relationship itself is to them different as the sex is different ; whereas the distinction in Yana is a linguistic one.

LEXICAL SIMILARITIES

It happens in California, as elsewhere, that occasionally two neighboring but unrelated languages have a few words in common, owing presumably to borrowing of one from the other. Such loan-words, however, are not frequent nor widespread enough to call for special attention. The words for 'dog' are an exception. These, in at least a dozen Californian stocks, are so similar that there can be no question that they are only variant forms of one common word.¹

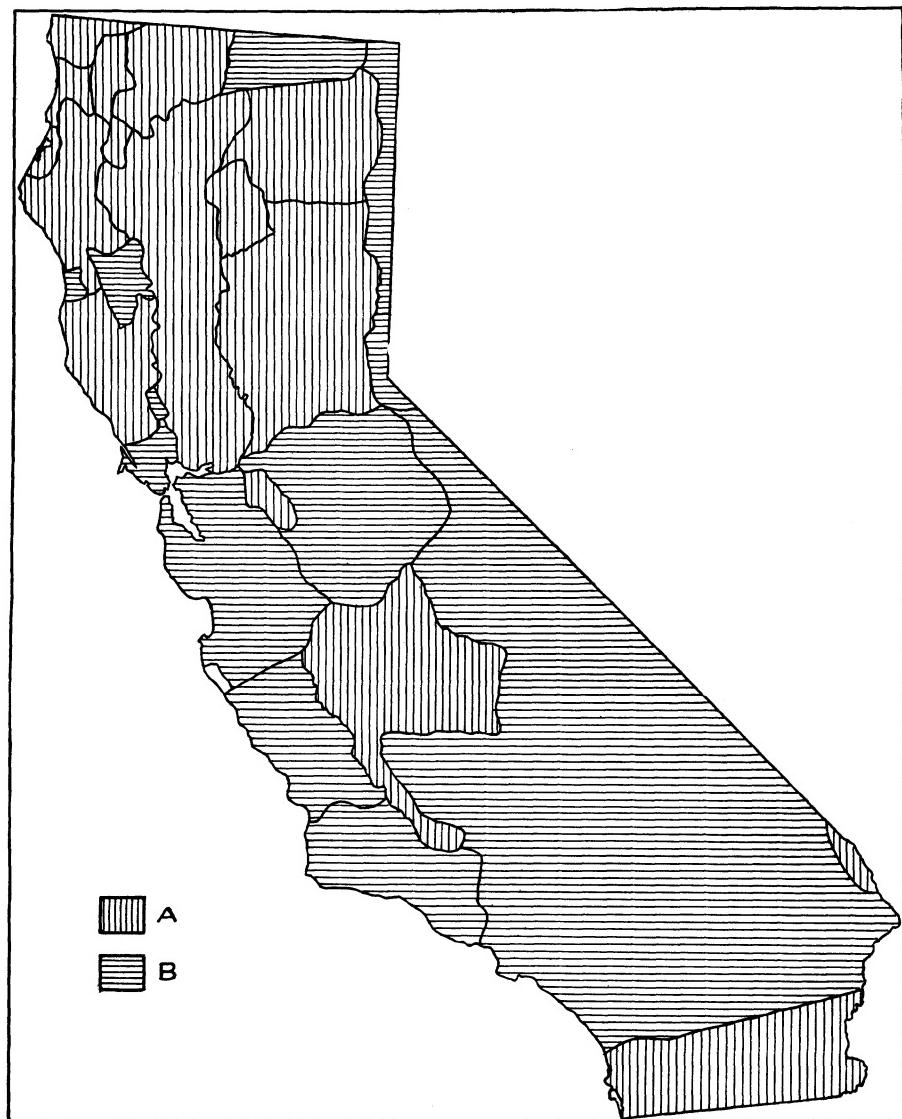
The roots for 'food' or 'eat' also show considerable similarity in a number of languages.² In several languages the word for 'salmon' is derived from the root for 'eat' or 'food'.³ These languages, excepting one, the Yuki, are all in the northwestern part of the state, where salmon was more distinctly the staple food than elsewhere. Similar identities in derivation and composition of words may probably be expected in other cases between stocks whose lexical elements themselves are distinct.

The pronominal roots of the first and second persons of Californian languages show many similarities. As regards the first person, nine of the twenty-two stocks have *n* as the primary element of the pronoun and four others have *k*. As regards the pronoun of the second person, *m* is the root of eighteen of the

¹ Similar words for dog are: Yurok, *tsic*; Chimariko, *sitcela*; Wintun, *tcutcu*, *sukut*, *suku*; Yana, *cuc*, *cucu*; Maidu, *sü*, *suku*; Washo, *suku* (-*gucu* in composition); Moquelumnan, *tcuku*; Costanoan, *wutcu*, *matcan*; Salinan, *otco*; Chumash, *hutcu* (-*go* in composition); Yokuts, *tceec* (*pus* in another dialect). Shoshonean *saridj* (Ute), and Nahuatl *tcitci* (*chichi*) may be the same word.

² Similar roots for eat are: Salinan, *lam*; Esselen, *am*; Costanoan, *am*; Moquelumnan (Chumteya), *ua*, (Talatui) *tcam*; Wintun, *ba*; Yuki, *haⁿw*; Chimariko, *ham*, *yem*; Achomawi (Hat Creek), *am*; Karok, *am*; Washo, *emlu*.

	Eat, food	Salmon
³ Yuki,	<i>haⁿwaii</i> ,	<i>haⁿwe</i> .
Yurok,	<i>nep</i> ,	<i>nepui</i> .
Karok,	<i>am</i> ,	<i>ama</i> .
Wishosk,	<i>watla</i> , <i>ptla</i> ,	<i>mailak</i> .
Shasta,	<i>kitsku</i> ,	<i>kitar</i> .
Chimariko,	<i>hameu</i> , <i>yemax</i> ,	<i>umul</i> .



LANGUAGES OF CALIFORNIA. 8—PLURAL

A, absent. *B*, present.

stocks.¹ These correspondences seem very remarkable. The phenomenon, however, is not specifically Californian, for it has been noted that the majority of American languages have either *n* or *m* or both for the roots of their pronouns.

CLASSIFICATION²

In combining a consideration of the structural features that have been separately discussed, in order to form a classification of the languages of the state, Yuman must be omitted. This language, which belongs only in very small part to California, shows very little resemblance to any language in the state. It is true that Shoshonean and Athabascan are also very widely spread extra-Californian stocks, but they are both in contact, territorially, with a large number (seven or eight) of distinctly Californian languages, while Yuman is detached from all of them, being contiguous, within the state, only with Shoshonean. On *a priori* grounds Yuman might therefore be expected to have little in common with the mass of Californian languages, and inasmuch as this is the case, it may be omitted from the present consideration.

The remaining twenty-one linguistic stocks of the state seem to fall into the three groups that have been previously indicated.

The southwestern group comprises Chumash and Salinan. No other languages can be positively assigned to it. Yokuts is distinctively of the Maidu type, and the same is true of Costanoan and probably of Esselen. Moqulemunna shows resemblance to this group in some points, but is geographically isolated from it; moreover, it has at least as much affinity with Maidu. This group must therefore be considered to consist of only two languages. Chumash may be taken as the type.

1

The Shasta, Achomawi, and Yana forms are possessives, the Lutuami objective. The pronoun of the first person in Yuki is *a'p*, *ii*, and *iit*. In Chumash it is *k* in composition and *noi* when independent. In Yuman it is either vocally lacking or expressed by *ny*.

² See plate II.

The northwestern group occupies the northwestern corner of the state. Its territory is about as confined¹ as that of the southern group, but the number of stocks comprised in it is larger, being five. These are the closely similar Yurok and Wishosk; with Athabascan; Karok; and Chimariko. Karok and Chimariko show the type of the class less clearly than the other members of the group. For convenience Yurok may be taken as the type of this group.

The central group with its subdivisions includes all the remaining languages except Yana and perhaps Washo, and is therefore most characteristic of the state as a whole. Maidu is an excellent type of this group. In the north, Shasta and Achomawi, on account of more involved phonetics and verbal incorporation, must be regarded as forming a somewhat distinct subgroup. In the south, Moquelumnan, on account of the presence of incorporation and other features, must be regarded for the present as showing another subtype.¹ The languages of the central group accordingly are Maidu, Lutuami, Wintun, Yuki, Pomo, Costanoan, Esselen, Yokuts, Shoshonean; and, less distinctively, Shasta, Achomawi, Moquelumnan, and possibly Washo.

Yana shows so few similarities to other languages that it cannot be included in any group.

The characteristics of the three groups are as follows :

Southwestern or Chumash type : Pronominal incorporation, well developed plural, lack of syntactical cases, use of prepositions instead of case-appositions, and a not very simple phonetic system.

Northwestern or Yurok type : Systematic pronominal incorporation, total lack of a plural, lack of syntactical cases, presence of material cases, and phonetics that are more or less rough and involved.

Central or Maidu type : Absence of pronominal incorporation, an undeveloped plural, syntactical cases, material cases, and distinct, simple, and soft phonetics.

It will be noted that the great Athabascan family has been included in one group of minor Californian languages, and similarly

¹ The position of Moquelumnan must be left somewhat uncertain because it is as yet undetermined whether this language and Costanoan form one stock or two. If they should prove to be genetically related, the combined Mutsun family, on account of the decided similarity of Costanoan to the Maidu type added to the partial resemblance of Moquelumnan, would unquestionably fall into the central group.

Shoshonean with another. It should not be assumed that the languages of the northwestern group have all acquired their characteristics through the influence of Athabascan. There has possibly been considerable influence exerted by Athabascan on the contiguous languages of the northwestern part of the state, but it is equally probable that these languages have affected the branch of Athabascan with which they have been in contact. It is not yet known how far Hupa and other Californian Athabascan dialects are modified from the Athabascan of other parts of America, nor whether the modifications are in the direction of characteristics possessed by the other languages of northwestern California. Analogously with Shoshonean in its contact with Maidu and other Californian languages.

It must also be borne in mind that the classification given has been made only for California. Shoshonean, for instance, may have much closer affinities with a group of languages elsewhere; it is asserted only that in so far as Shoshonean is a Californian language, and in so far as it has similarities with Californian languages, it belongs to the Maidu class. The question of whether its Californian or its Mexican structural correspondences are greater has of course not been touched upon, even by implication.

A third inference that must not be made is, that if any language elsewhere be similar to either of these two great stocks, Athabascan or Shoshonean, it is therefore similar to the corresponding group of Californian languages. Thus Kootenay (Kitunáha) has been declared to be structurally much like Shoshonean;¹ but it does not follow that it is at all like Maidu or Wintun. Different principles of comparison and classification may have been used in comparing Shoshonean with Kootenay and in comparing Shoshonean with Californian languages. In the present systematization for California, pronominal incorporation and syntactical cases and similar characteristics have been made the basis of classification; for other parts of North America other features, such as nominal incorporation and reduplication and monosyllabic structure, might be the important ones to consider. The mere fact that any extra-Californian language is similar to either Shoshonean or Athabascan, does not, then, by any

¹ A. F. Chamberlain in *Report B. A. A. S.*, 1892, p. 589.

means, make it necessary that it is similar to any group of Californian languages.

Comparisons between the languages of California, as a whole, and those of any neighboring area, can be made only in one direction. To the west is the ocean, and to the south and east there extend, for long distances, only the Yuman and Shoshonean (including the perhaps related Piman) stocks, above discussed. To the north, however, the linguistic diversity of California is continued into Oregon, and here, wherever there is material, comparisons may be made.

Of the eleven linguistic stocks of Oregon, three — Athabascan, Lutuami, and Shoshonean — occur in California and have already been considered. Of two others, Takilman and Kusan, both in the southern part of the state, nothing whatever is known morphologically. This leaves six stocks more or less available for comparison : Sahaptin, Chinook, Kalapuyan, Yakonan, Waiilatpuan, and Selish. Sahaptin,¹ as has been said, is morphologically similar to Lutuami and Maidu, and therefore bears resemblance to the central group of California. It is not contiguous to Lutuami nor to Maidu, but is connected with them by an intervening area of Shoshonean. Chinook² is of a very different type. It is characterized by thorough incorporation, lack of cases, an article important in the sentence structure, pronominal sex-gender, and a very rough phonetic system. Kalapuyan³ shows several similar features. Yakonan also appears to belong to the same general type.⁴ Waiilatpuan, according to scanty material collected by one of the authors, appears to be morphologically intermediate between Chinook and Sahaptin, but to incline probably to the Chinook type. Selish,⁵ finally, is also unlike the Californian languages. Its specialized and difficult phonetics, high development of reduplication and its substantival suffixes do not occur in California. It therefore appears that, beyond Sahaptin, no languages outside of California belong to any of

¹ *Trans. Am. Eth. Soc.*, vol. II. Pandosy (Shea, *Library Am. Ling.*, vol. VI). Hale in *U. S. Expl. Exped.*, vol. VII.

² Boas in *Am. Anth.*, 1893, vol. VI, pp. 55-65. Swanton in *Am. Anth.* (N. S.), 1900, vol. II, pp. 199-238.

³ Hale, op. cit., vol. VII, p. 564. Gatschet in *Mag. Am. Hist.*, vol. I, p. 167.

⁴ According to the information of Dr Livingston Farrand.

⁵ Boas in *Rep. B. A. A. S.*, 1890, pp. 679-688. Mengarini, *Gram. Ling. Sal.* (Shea, *Library Am. Ling.*, vol. II).

the groups that have been established in California, unless the two as yet unknown languages of the coast of southern Oregon — Takilman and Kusan — should prove to have similarities.

It is interesting to note that the linguistic classification that has been made is corroborated to a considerable extent by differences of culture in the several groups in question. The small group of five stocks in northwestern California, constituting a well-marked linguistic type, are distinct in culture also. All the tribes of this region possess a specialized culture which differs from that of the rest of the state in the development of art, the extensive use of canoes, the importance of salmon as a food, in the strong development which ideas of property have exerted on social conditions, and the character of their ceremonies and of their myths.

The central group, on the other hand, though showing more variation in culture, is nevertheless quite clearly distinguished by the general absence of the canoe, the great dependence on the acorn for food, the extreme development of the use of feathers for ceremonial and other purposes, by the myths, and by ceremonial organizations such as the Secret Society of the Maidu. The widespread custom of cremation and of the annual ceremony of the "Burning" for the dead are also characteristic of this group.

The southwestern group is too little known to warrant much reliance on any cultural corroboration of linguistic groupings. It would seem, however, that it possessed several distinguishing features, such as rather remarkable development of the canoe, considerable dependence on fish for food, and perhaps a rather special type of art, particularly in carving.

It seems, therefore, that cultural groupings coincide more or less with linguistic grouping.

A principle that appears prominently in the facts that have been presented is that of territorial continuity of characteristics. A feature is rarely found in only one language. When it does occur in several stocks, as is usually the case, these are not scattered at random and more or less detached from each other, but generally form a continuous or nearly continuous area, however irregular its outline may be. This principle applies as well to types of languages as to single characteristics.

The principle of territorial continuity of types, however, shows an exception. In southern central California, Yokuts and Moquelumnan occupy positions such that, if they were interchanged, the continuity of type would be greater. Yokuts linguistically belongs clearly to the Maidu type; while Moquelumnan, which separates it geographically from Maidu, shows certain resemblances to Chumash and Salinan, with which Yokuts is in contact. In addition, Yokuts is divided; a fragment of the stock lies north of the main body, nearly in contact with the Maidu. Moquelumnan is also divided territorially, the smaller portion of the stock occupying a detached area on the coast immediately north of San Francisco. The uncertainty of the relationship between Moquelumnan and Costanoan makes the situation more complicated. It seems to be also generally assumed that the Shoshoneans are comparative newcomers in the state and have pressed upon the southern and eastern flank of the Yokuts. Altogether it is evident that there has been some shifting of population in the part of the state about San Joaquin valley.

In the north, territorial continuity is not interrupted, but Yana forms an isolated islet, so to speak, having virtually no linguistic resemblances with its neighbors. In fact, it is not known to have affiliations anywhere.

If the scattering indications of movements be compared, it is found that the latter have been generally in a north and south line, parallel to the coast. Yokuts has affinities to the north, and its two fragments lie in a north and south line. The Yuki territory consists of three areas, one south of the others. The Athabascans are distributed in a north and south direction. Yana and Moquelumnan do not present decided indications of movement in any direction. So far as there is evidence, accordingly, it points to a general north and south direction for the movements within the state.

Such movements of stocks, however, become rather inconspicuous if we regard the state as a whole, and the relative stability of population as opposed to the instability in the central portions of the continent is a noteworthy feature. That territorial stability and not instability should, on the whole, be characteristic of the tribes of California is only natural from the fact that they fall into a few compact and continuous groups.

APPENDIX A.

HUPA (ATHABASCAN) OBJECTIVE CONJUGATION.

nuxtsis = I saw thee.

Singular.

Subj.	Obj.	me.	thee.	him.
Sing.	I		<i>nuxtsis</i>	
	thou	<i>xwiLtsis</i>		<i>xuxtsis</i>
	he	<i>tcuxwiLtsis</i>	<i>tcuxniLtsis</i>	<i>xuxtsis</i>
Plural.	we		<i>nidiLtsis</i>	<i>yaxodiLtsis</i>
	ye	<i>noxwoLtsis</i>		<i>noxdöLtsis</i>
	they	<i>yaxwiLtsis</i>	<i>yaxwiLtsis</i>	<i>yaoxoLtsis</i>

Plural.

Subj.	Obj.	us.	ye.	them.
Sing.	I		<i>nuxuxtsis</i>	<i>yaxuxtsis</i>
	thou	<i>noxoLtsis</i>		<i>yaxuxtsis</i>
	he	<i>noxtciLtsis</i>	<i>nuxtciLtsis</i>	<i>yaoxoLtsis</i>
Plural.	we		<i>noxodiLtsis</i>	<i>yaxodiLtsis</i>
	ye	<i>noxwoLtsis</i>		<i>xwoLtsis</i>
	they	?	?	<i>yanLiLtsis</i>

ACHOMAWI OBJECTIVE CONJUGATION (SINGULAR).

qäl = strike.

Subj.	Obj.	me.	thee.	him.
I				
	thou	<i>sketoQali</i>	<i>l^EhetoQalitskE</i>	<i>setoQali</i>
	he	<i>sitoQalma</i>	<i>kitoQalitskE</i>	<i>ketoQali</i>

MOQUELUMNAN OBJECTIVE CONJUGATION (SINGULAR).

eleya = see.

Subj.	Obj.	me.	thee.	him.
I				
	thou	<i>eteyates (iga)</i>	<i>eteyanima</i>	<i>eteyakōma</i>
	he	<i>eteyatewō</i>	<i>eteyani</i>	<i>eteyanis (ikazōtī)</i>

CHUMASH OBJECTIVE CONJUGATION (SINGULAR).

iniwe = kill.

Subj.	Obj.	me.	thee.	him.
I				
thou		<i>p-iniwe-l-it</i>	<i>k-iniwe-l-in</i>	<i>k-iniwe</i>
he		<i>s-iniwe-l-it</i>	<i>s-iniwe-l-in</i>	<i>p-iniwe</i>
				<i>s-iniwe</i>

YUKI OBJECTIVE CONJUGATION (SINGULAR).

naⁿwiwi = saw.

Subj.	Obj.	me.	thee.	him.
I				
thou		<i>mi ii naⁿwiwi</i>	<i>aⁿp mis naⁿwiwi</i> ¹	<i>aⁿp naⁿwiwi</i>
he		<i>ii naⁿwiwi</i>	<i>mis naⁿwiwi</i>	<i>mi naⁿwiwi</i>
				<i>naⁿwiwi</i>

YOKUTS OBJECTIVE CONJUGATION (SINGULAR).

cilhin = saw.

Subj.	Obj.	me.	thee.	him.
I				
thou		<i>cilhin manan</i>	<i>cilhin namam</i>	<i>cilhin na</i>
he		<i>cilhin nan</i>	<i>cilhin mam</i>	<i>cilhin ma</i>
				<i>cilhin</i>

MAIDU OBJECTIVE CONJUGATION.

yok = strike.

Singular.

Subj.	Obj.	me.	thee.	him.
Sing. I				
thou		<i>[kon mi hano nik yokon mom a nik yokon</i>	<i>ni hai min yokon mom a min yokon</i>	<i>nihai moye yokon mi hano moye yokon mom a moye yokon</i>
he				
Dual. we 2		<i>[yokon mimamaiamo nik mosami nik yokon</i>	<i>nisamaias min yokon mosami min yokon</i>	<i>nisamaias moye yokon mimamaiam moye yokon mosami moye yokon</i>
ye 2				
they 2				
Plural. we		<i>[yokon mimemaiemo nik mopami nik yokon</i>	<i>nisemaies min yokon mopami min kokon</i>	<i>nisemaies moye yokon mimemaiemo moye yokon mopami moye yokon</i>
ye				
they				

¹ *aⁿp mis* is also contracted to one word, *amis*.

MAIDU OBJECTIVE CONJUGATION.—Continued.

yok = strike.

Dual.

Subj.	Obj.	us 2.	ye 2.	them 2.
Sing.	I	<i>mi hano nisa yokon</i>	<i>ni hai mima yokon</i>	<i>ni hai mosa yokon</i>
	thou	<i>mom a nisa yokon</i>	<i>mom a mima yokon</i>	<i>mi hano mosa yokon</i>
	he			<i>mom a mosa yokon</i>
Dual.	we 2		<i>nisamaias mima yokon</i>	<i>nisamaias mosa yokon</i>
	ye 2	<i>mimamaiamo nisa yokon</i>		<i>mimamaiamo mosa yokon</i>
	they 2	<i>mosami nisa yokon</i>	<i>mosami mima yokon</i>	<i>mosami mosa yokon</i>
Plural.	we		<i>nisemaias mima yokon</i>	<i>nisemaias mosa yokon</i>
	ye	<i>mimem aiemo nisa yokon</i>		<i>mimemaiemo mosa yokon</i>
	they	<i>mopami nisa yokon</i>	<i>mopami mima yokon</i>	<i>mopami mosa yokon</i>

Plural.

Subj.	Obj.	us.	ye.	them.
Sing.	I		<i>ni hai mime yokon</i>	<i>ni hai mopa yokon</i>
	thou	<i>mi hano nise yokon</i>		<i>mi hano mopa yokon</i>
	he	<i>mom a nise yokon</i>	<i>mom a mope yokon</i>	<i>mom a mopa yokon</i>
Dual.	we 2		<i>nisamaias mime yokon</i>	<i>nisemaias mopa yokon</i>
	ye 2	<i>mimamaiamo nise yokon</i>		<i>mimamaiamo mopa yokon</i>
	they 2	<i>mosami nise yokon</i>	<i>mosami mime yokon</i>	<i>mosami mopa yokon</i>
Plural.	we		<i>nisemaias mime yokon</i>	<i>nisemates mopa yokon</i>
	ye	<i>mimemaiemo nise yokon</i>		<i>mimemaiemo mopa yokon</i>
	they	<i>mopami nise yokon</i>	<i>mopami mime yokon</i>	<i>mopami mopa yokon</i>

APPENDIX B.
COMPARATIVE LIST OF SYNTACTICAL CASES AND APPPOSITIONS.¹

Yurok.	Karok.	Wishosk.	Chimariko.	Shasta.	Achomawi.	Yana.	Maidu.	Wintun.	Washo.	Pomo.	Costanoan. ⁴	Esselrn.	Chumash.	Salinan.	Chumash.	Yokuts.	Lutuamis. ⁵
-L-	-ak	-ak	-ak	-	-kwa	-	-	-	-	-	-	-	-	-	-	-	-
Locative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ablative	-	-	-	-	-	-	-	-m	-	-	-a-	-	-	-	-	-	-
Terminalis	-	-	-	-	-	-to	-wu	(-k)	-k,-ki	-	-at	-ibax	-i(?)	-	-	-a-	-
Intrressive	-	-	-	-	-	-to	-	-	-	-di	-ac'i	-a-	-	-	-	-ta'	-ta'
Superessive	-	-	-	-	-	-to-k	-duk	-du	-na	-na	-mo	-mo	-	-	-	-	-xen?
Subessive.....	-	-	-	-	-	-nini	-d'g'g'w	-kcu	-nak	-a	-	-	-	-	-	-	-
Inessive	-	-	-	-	-	-d'g'g'w	-kcu	-	-	-di	-el-	-a,-aca	-i	-	-	-	-i-
Antessive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Postessive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juxtapositive	-	-	-	-	-	-	-	-	-	-kan	-d'li'l	-h'aka	-i,-yai	-	-	-k'ha	-
Comitative	-	-	-	-	-	-	-	-	-	-ii	-ook	-ook	-	-	-	-pa'zo	-
Instrumental	-meL	-muk	-	-	-m'di	-pr	-a	-	-	-ing	-	-	-	-	-	-manu	-
Similative	-	-	-	-	-	-xa	-	-	-	-	-	-	-	-	-	-ni,-ang	-ka

¹ In this table only a single language from each stock is represented. A dash denotes evidence of the absence of the case or apposition in question. A blank indicates that no form has as yet been found, but that the possibility of its existence is not precluded.

² May also be used before a noun.

³ Kulanapo language.

⁴ Rumsien language.
⁵ From Gatschet, "Grammar of the Klamath Language," *Cont. N. A. Eth.*, vol. II, pt. I.

⁶ Also -kci.
⁷ Also -tala.